



**We make Combustion Systems
safe, reliable and efficient**

**Specialist for Control,
Monitoring and Optimisation
of Combustion Systems**



Sensors and systems for combustion engineering

www.lamtec.de

We work with our customers to create innovative solutions for combustion applications

We can supply you with everything you need for future-oriented combustion technology.

LAMTEC manufactures sensors and systems for combustion technology.

Our knowledge is based on decades of industry experience and in-depth market knowledge.

We stand for innovation, technology and the highest levels of product quality. Global coverage enables rapid delivery times, seamless processes and first class service for our customers.

We work with our customers on a daily basis to provide solutions to complex applications and logistical challenges.

Customer satisfaction and the highest product quality are our main objectives!

Our Portfolio

- Burner control units
- Electronic fuel/air ratio control systems
- Flame monitoring systems
- O₂ measuring and control units
- Adaptive CO control
- Sensors for detecting unburnt gaseous components (CO/H₂) and NO_x
- Volumetric flow measurement devices
- Ignition systems



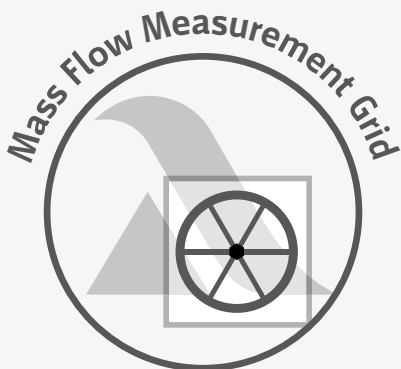
Our Products

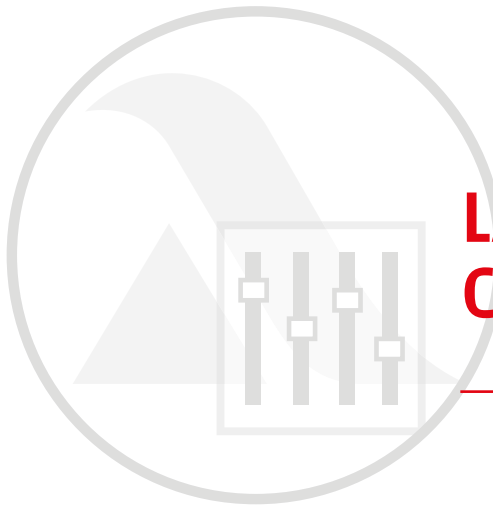
LAMTEC is market leader in the manufacturing of analytical measuring equipment in the field of combustion engineering. We offer efficient technology with maximum functionality.

- Failsafe functioning and flexible availability
- Universally applicable
- Conforms to all relevant sector-specific standards and approvals
- Reliable and certified
- Increase efficiency and energy savings
- Reduce fuel consumption and environmentally harmful CO₂ emissions
- Compensate for disturbances

Why you should choose us

- Medium flexibility and agility
- Worldwide availability
- Well-established by name, almost all international burner manufacturers use LAMTEC units
- On-site service and hotline
- Together we solve your challenges
- Continuous innovation and advanced technology
- We reinvest a large part of our proceeds
- Exchange ideas directly with our service technicians





LAMTEC Combustion Management

LAMTEC Combustion Management makes combustion simpler than ever before.

Optimised configuration and control are key requirements if burners are to be as environmentally-friendly and energy-efficient as possible, saving fuel and cutting costs.

LAMTEC develops devices that guarantee exact combustion control!

What this means for you:

- As little energy input as possible
- Lowest possible pollutant emissions
- Maximum efficiency

LAMTEC burner control units undergo continuous development to optimise and monitor oil, gas and solid fuel burners.

They compensate combustion variables with high availability and failsafe functionality

Systems from basic to high end:

- Burner control and/or ratio control with up to 10 channels
- For control panel installation or mounting on the burner
- CO/O₂ control
- O₂ trim
- Valve leakage test
- Flame monitoring system
- PID load controller for burner firing rate
- Mixed firing of multiple fuels in fixed or variable ratio
- Highest flexibility without / with Soft-SPS
- Graphic HMI
- Interfacing to third-party systems using standard Fieldbus protocols
- International approvals

Overview of our systems:



CMS



BT300



CMS in operation

Highlights

- Environmental protection thanks to reduced emissions
- Type approved
- SIL3
- Customised solutions
- Improved efficiency combined with minimised costs
- Energy savings on electricity and fuel
- Easy operation
- Short commissioning times



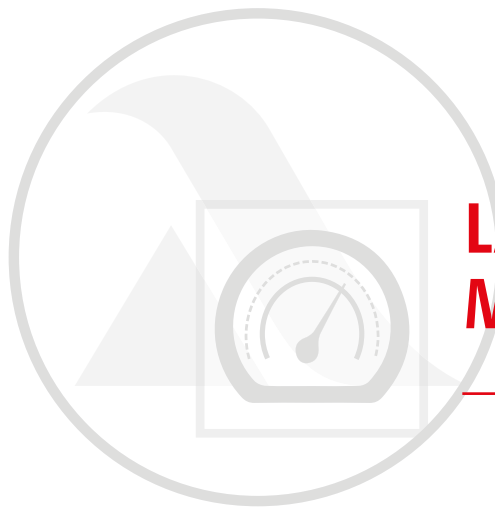
ETAMATIC



ETAMATIC OEM



FMS



LAMTEC Sensors and Measuring Systems

Accurate and reliable exhaust gas measurement for all fuels and applications

LAMTEC sensors and measuring systems ensure the correct measurement for optimum combustion. Our measuring systems can be used for measuring exhaust gas from virtually all fuels:

- Natural gas, heating oil (extra-light), heating oil (heavy), hydrogen
- Particle-laden fuel exhaust gases, biomass
- Coke oven gases, furnace gases
- Coal and special fuels

Systems from basic to high end:

- Range of measuring for O₂: 0 - 21 %
- Measurement directly in wet flue gas up to 1400 °C in-situ
- Rapid reaction and setting times

- Rapid response time
- Permanent measured value recording of oxygen (O₂) and oxidisable flue gas components (CO/H₂) and NO_x
- In-situ measurement of wet flue gas - extraction sampling not required
- No gas preparation
- Short or no recovery time with CO/H₂
- Suitable for fuel exhaust gases containing dust
- Automatic/semi-automatic calibration
- Degree of protection up to IP65
- Various designs for hazardous areas

In addition the following applies to CO_e and NO_x measurement system

- Clear and reliable detection of non-burned residue (CO/H₂) or NO_x
- Not affected by ingress/tramp air
- CO_e measuring range: 0 to 10,000 ppm
- NO_x measuring range: 0 to 3,100 ppm

Overview of our systems:



LT1 mit LS1



LT2 mit LS2



LT3 mit KS1D-HT / LT3 mit LS2-HT



LT3

Highlights

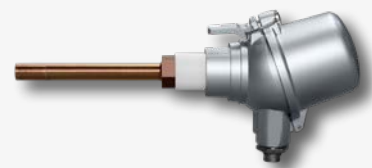
- Environmental protection thanks to reduced emissions
- Improved efficiency combined with minimised costs
- Energy savings on electricity and fuel
- Easy operation
- Short commissioning times
- Low-maintenance
- Robust
- Customised solutions
- Up to SIL3 soon available



LT3-Ex mit KS1D-Ex



NO_x



CarboSen ST



LAMTEC Flame Monitoring System

With us the flame is always in sight - flame monitoring systems for safe combustion

We offer a modular product range covering all aspects of flame monitoring systems for reliable monitoring with a high degree of selectivity and availability for the following fuels:

- Natural gas, extra light heating oil, heavy heating oil
- Lignite, hard coal
- Biomass, biogas
- Special gases, special fuels

Systems from basic to high end:

- Combustion systems with and without flame and background radiation discrimination
- Single and multi-burner systems
- Combustion space monitoring
- Standard and compact models with integrated amplifiers and flame relays
- Up to three selectable operating modes/channels
- UV & IR sensors (including dual sensor options)
- Digital flame frequency evaluation
- Flame self-learning function ON/OFF
- Remote software with diagnostics function
- Option for networking multiple flame monitoring systems
- Degree of protection up to IP67
- EX-Zone I and II
- Various designs for hazardous areas
- Comprehensive range of accessories
- Advanced flame rating

Overview of our systems:



F300K / FO



F200K / FO



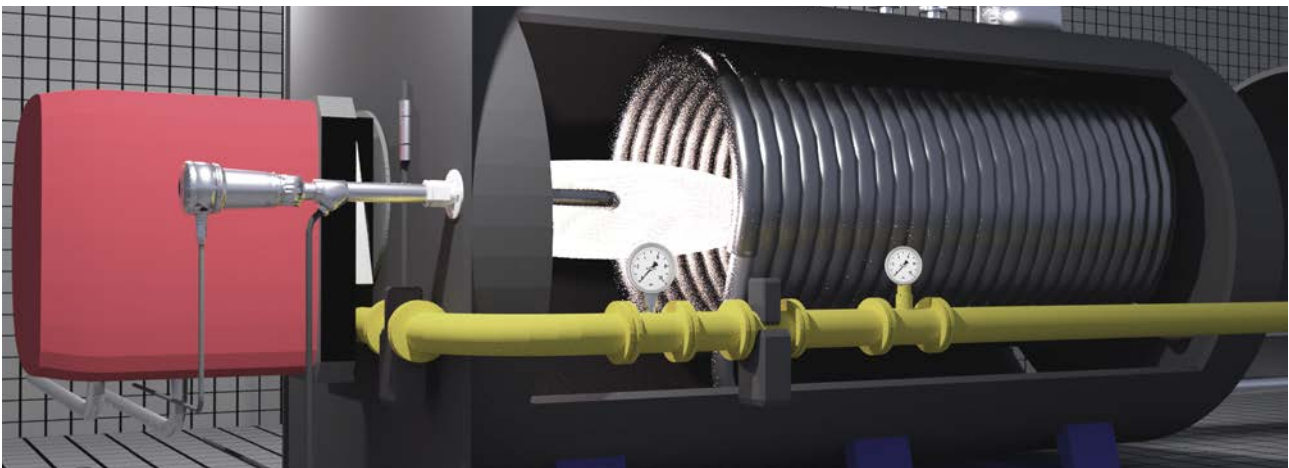
FFS07 / FFS08



FFS30 UV / IR



The LAMTEC F300K flame monitoring system in operation



Fibre Optics with Boiler

Highlights

- Simple operation and adjustment
- Very low maintenance requirements
- No wearing parts (without shutter)
- Flame rating
- Type approved and SIL3
- Continuous operation
- Safe area, Ex-Zone I and Ex-Zone- II
- Fibre optics for extremely high temperatures



F350



F152



F130I



LAMTEC Mass Flow Measurement Grid

Measuring the volumetric flow of gaseous media with us.

The principle of the mass flow measurement grid follows the Bernoulli energy equation on which the principle of the conservation of energy is based. The entire kinetic flow energy (without friction losses) remains constant as the sum of the dynamic and static pressure.

Systems from standard to bespoke

- Volumetric flow measurement of gaseous media in channels (e.g. supply air for combustion systems)
- Rectangular and round versions
- Different sizes, lengths and flange connections
- Made of stainless steel
- Calculation data for pressure transmitter included
- Optional flushing devices available for particle-laden media
- High repetition accuracy

Highlights

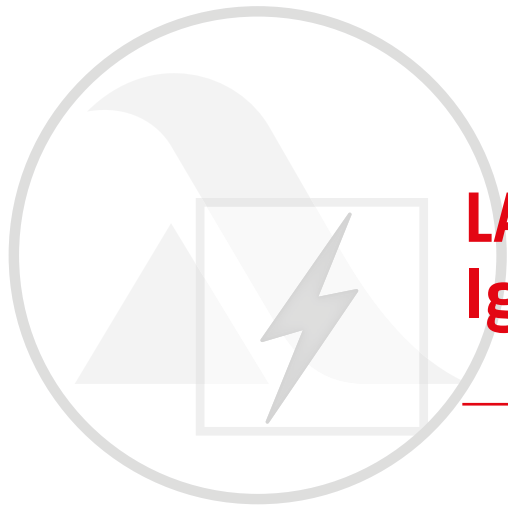
- Reduced upstream and downstream location requirements compared to single point systems
- Low pressure losses
- Low-maintenance
- Flexible thanks to customised production
- Customised solutions

Round mass flow measurement grid



Rectangular mass flow measurement grid





LAMTEC Ignition systems

With our ignition and pilot burners make the ignition of your combustion system a reliable event. LAMTEC ignition and pilot burners are designed for the reliable ignition of main burners in combustion systems of all kinds.

LAMTEC pilot burner GFI

- Fuels: natural gas LPG, coke gas, refinery gas
- Thermal rating up to 3 MW in special version up to 6 MW
- Flame length up to 3 m
- Intermittent or continuous operation
- SIL 3 certified
- Degree of protection up to IP65
- Available for hazardous areas

LAMTEC High Energy Igniters HEI

- Ignite liquid and gaseous fuels in burners of any capacity
- Compact design
- 100 % waterproof
- Suitable for hazardous environments
- Degree of protection IP65 / IP66
- Can be used at high temperatures of over 1000 °C
- Available as BASIC HEI500 and High-End HEI600

Highlights

- Simple operation and adjustment
- Low maintenance requirements
- Available with optional display at GFI
- Available for EX-Zone
- Customised solutions
- SIL 3

Overview of our systems:



GFI Variant



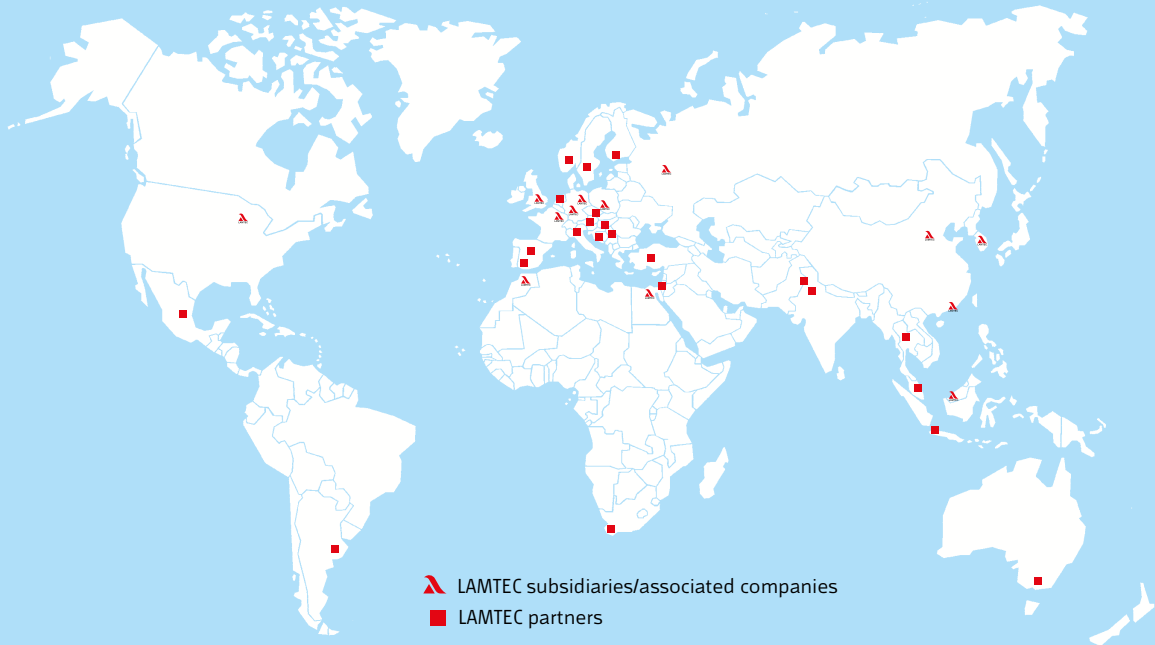
GFI Variant without power unit



LAMTEC High Energy Igniters HEI

We make Combustion Systems safe, reliable and efficient.

We have a global presence and are always on hand for speedy and specific advice



Approvals for individual devices:



Your personal contact partner.

Using our hotline, you can quickly and easily reach a personal contact partner who has the necessary expertise for you. In addition our sales partners and service engineers are at your disposal worldwide.

How to contact us:

Sales hotline: +49 (0) 6227 6052-88

Service hotline: +49 (0) 6227 6052-33

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